

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 10972 - L2 Version 2  
Chandra X-Ray Center

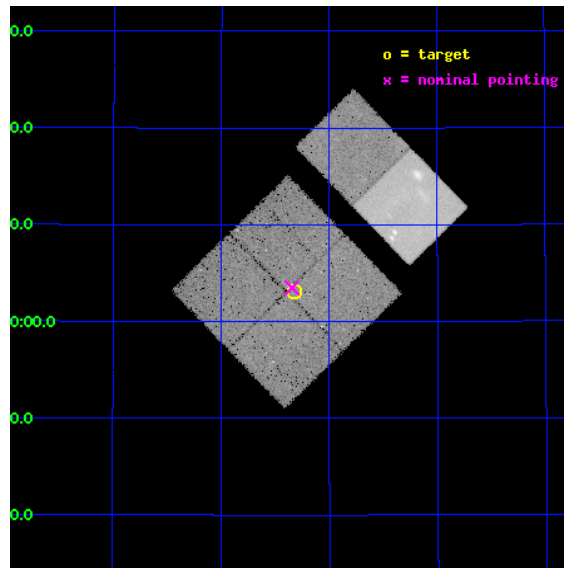
L2 Processing Date : Jun 22 2012

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# 1 Front

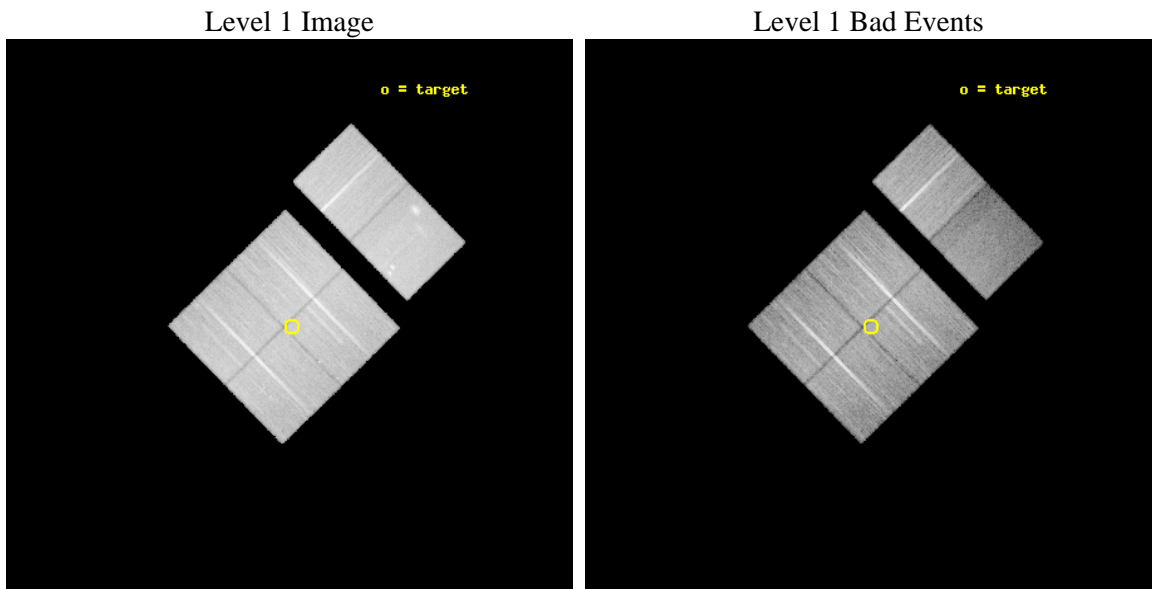
seq_num	200604	Sequence number
obs_id	10972	Observation id
title	The Chandra Cygnus OB2 Survey	Proposal title
observer	Dr. Jeremy Drake	Principal investigator
object	Cygnus OB2	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	308.581812	Observer's specified target RA [deg]
dec_targ	41.051001	Observer's specified target Dec [deg]
ra_nom	308.58668188386	Nominal RA [deg]
dec_nom	41.058190447847	Nominal Dec [deg]
roll_nom	45.705488937072	Nominal Roll [deg]
revision	2	Processing version of data
ontime	28035.076954663	Sum of GTIs [s]
livetime	27680.079929566	Livetime [s]
ontime0	28044.799895585	Sum of GTIs [s]
ontime1	28041.559024811	Sum of GTIs [s]
ontime2	28041.558925271	Sum of GTIs [s]
ontime3	28035.076954663	Sum of GTIs [s]
ontime6	28044.799895585	Sum of GTIs [s]
ontime7	28044.799895585	Sum of GTIs [s]
l2events	221637	Number of level 2 events



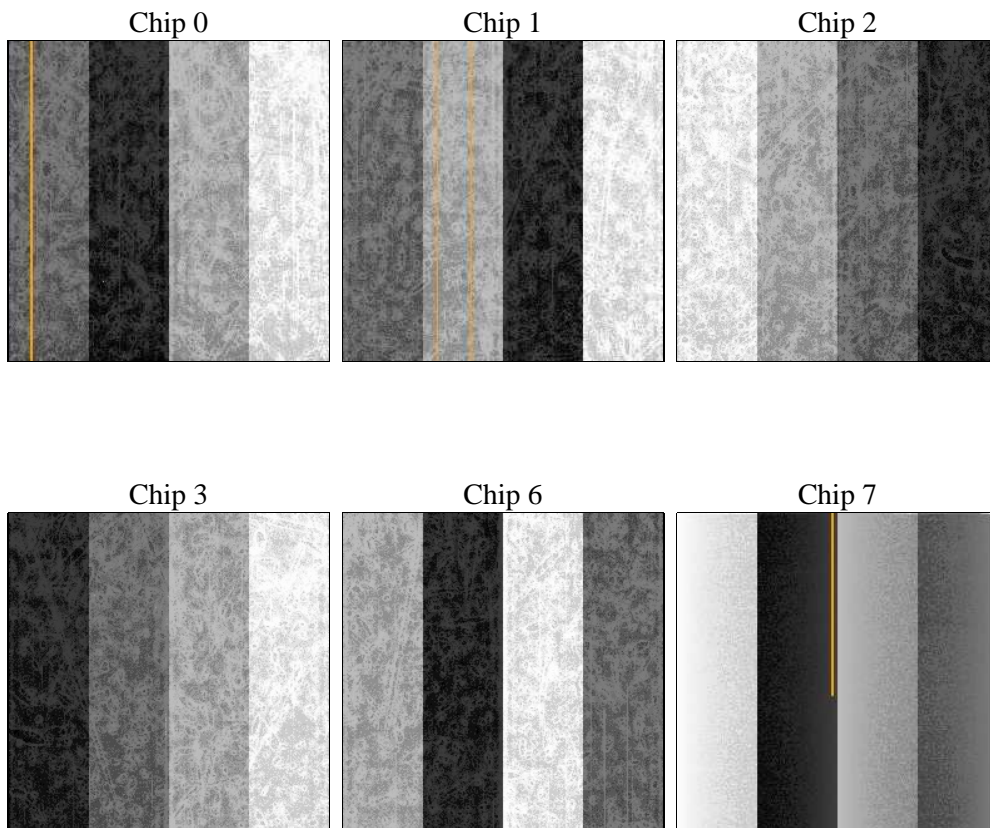
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	28000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	28035.076954663	Sum of GTIs [s]
caldsver	4.4.10	&#160	ontime0	28044.799895585	Sum of GTIs [s]
date	2012-06-22T16:12:09	Date and time of file creation	ontime1	28041.559024811	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	28041.558925271	Sum of GTIs [s]
			ontime3	28035.076954663	Sum of GTIs [s]
			ontime6	28044.799895585	Sum of GTIs [s]
			ontime7	28044.799895585	Sum of GTIs [s]
			l1events	1288988	Number of level 1 events

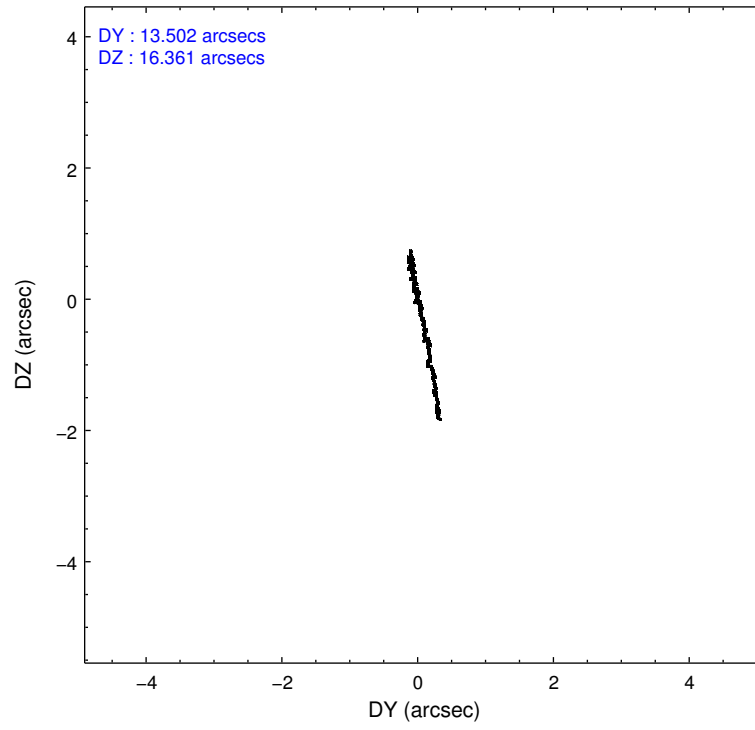
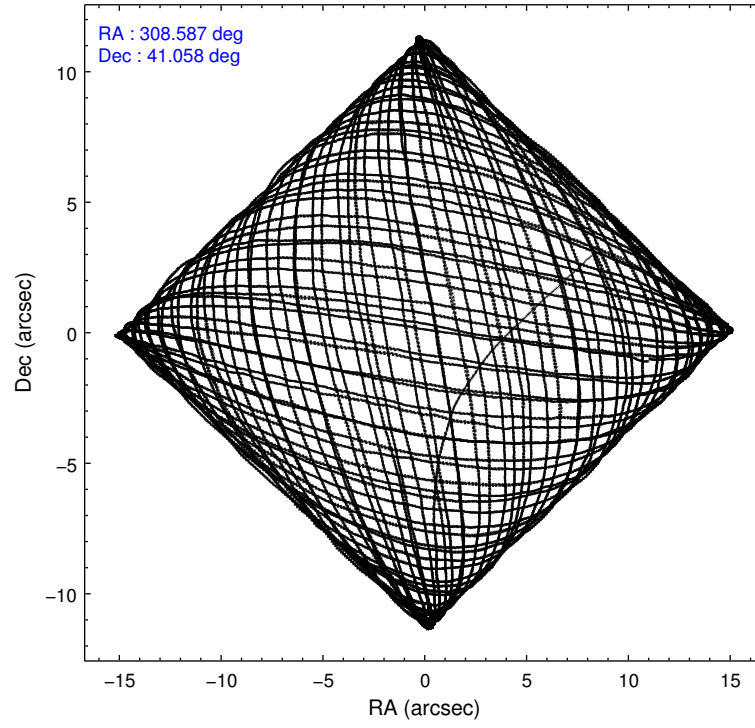
### 2.1.4 Events

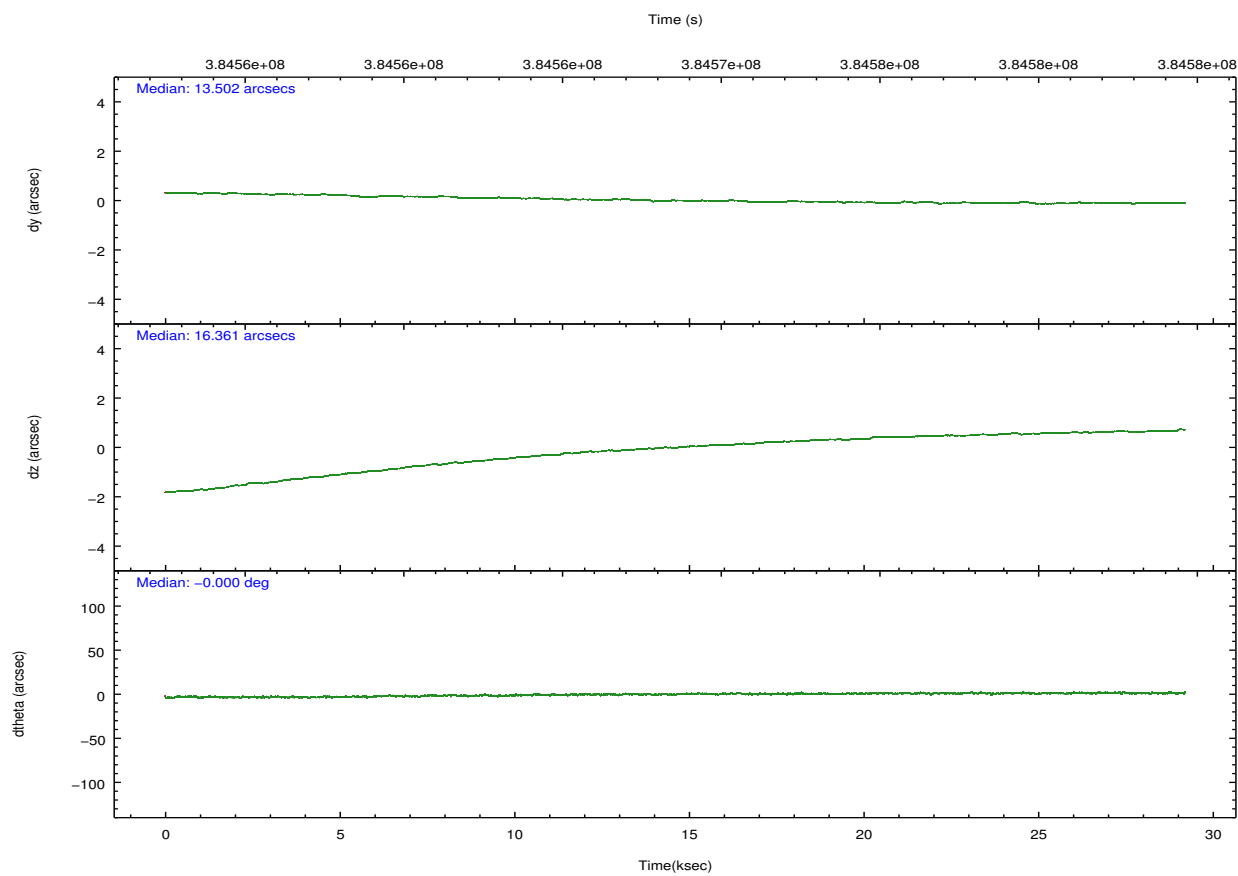
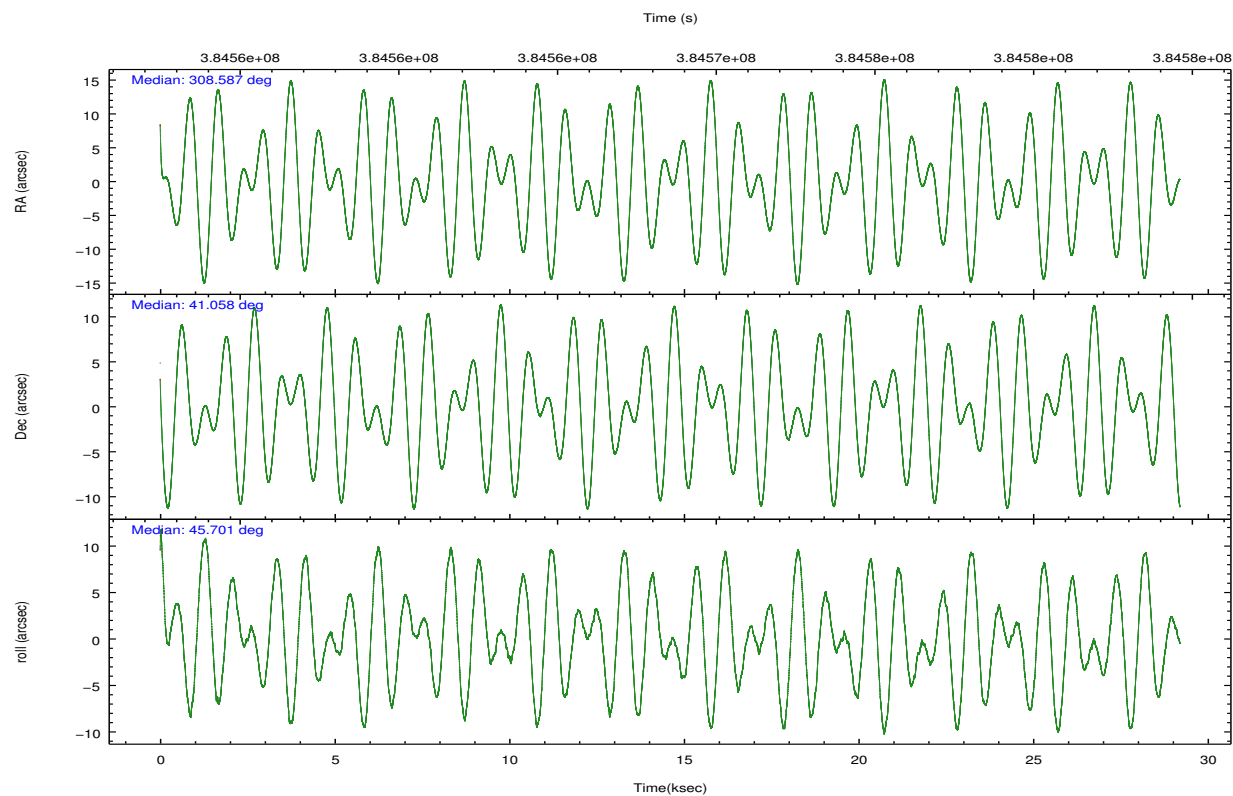
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	201257	193086	224848	212966	227441	229390	grade 0 events	8606	9285	9674	10815	11798	14534
rejected events	178377	168266	201035	188318	200047	108365		4%	4%	4%	5%	5%	6%
rejected %	88%	87%	89%	88%	87%	47%	grade 1 events	119	107	149	157	124	345
								0%	0%	0%	0%	0%	0%
							grade 2 events	5632	5571	5611	5103	5793	26509
								2%	2%	2%	2%	2%	11%
							grade 3 events	2452	2622	2297	2342	2554	11760
								1%	1%	1%	1%	1%	5%
							grade 4 events	2176	2607	2311	2351	2484	11579
								1%	1%	1%	1%	1%	5%
							grade 5 events	7055	7555	6425	7734	7753	23103
								3%	3%	2%	3%	3%	10%
							grade 6 events	4018	4739	3928	4042	4768	56670
								1%	2%	1%	1%	2%	24%
							grade 7 events	171199	160600	194453	180422	192167	84890
								85%	83%	86%	84%	84%	37%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-012367	ACIS-012367	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	Y	Y
Observation mode	POINTING	POINTING	CCD I1 on	Y	Y
[deg] Pointing RA	308.577817	308.58668188386	CCD I2 on	Y	Y
[deg] Pointing Dec	41.031531	41.05819044784663	CCD I3 on	Y	Y
[deg] Pointing Roll	45.502629	45.705488937072	CCD S0 on	N	N
[mm] SIM focus pos	-0.782348	-0.7809083437167272	CCD S1 on	N	N
[mm] SIM defocus	0	0.001439871863259334	CCD S2 on	O1	Y
[mm] SIM translation stage pos	-233.592463	-233.5874344608287	CCD S3 on	O2	Y
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	384555140.184000	384552809.59612	CCD S5 on	N	N
Observation start date	2010-03-09T20:51:14	2010-03-09T20:13:29	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	384583140.184000	384583274.13516	On-chip summing requested	N	N
Observation end date	2010-03-10T04:37:54	2010-03-10T04:41:14	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



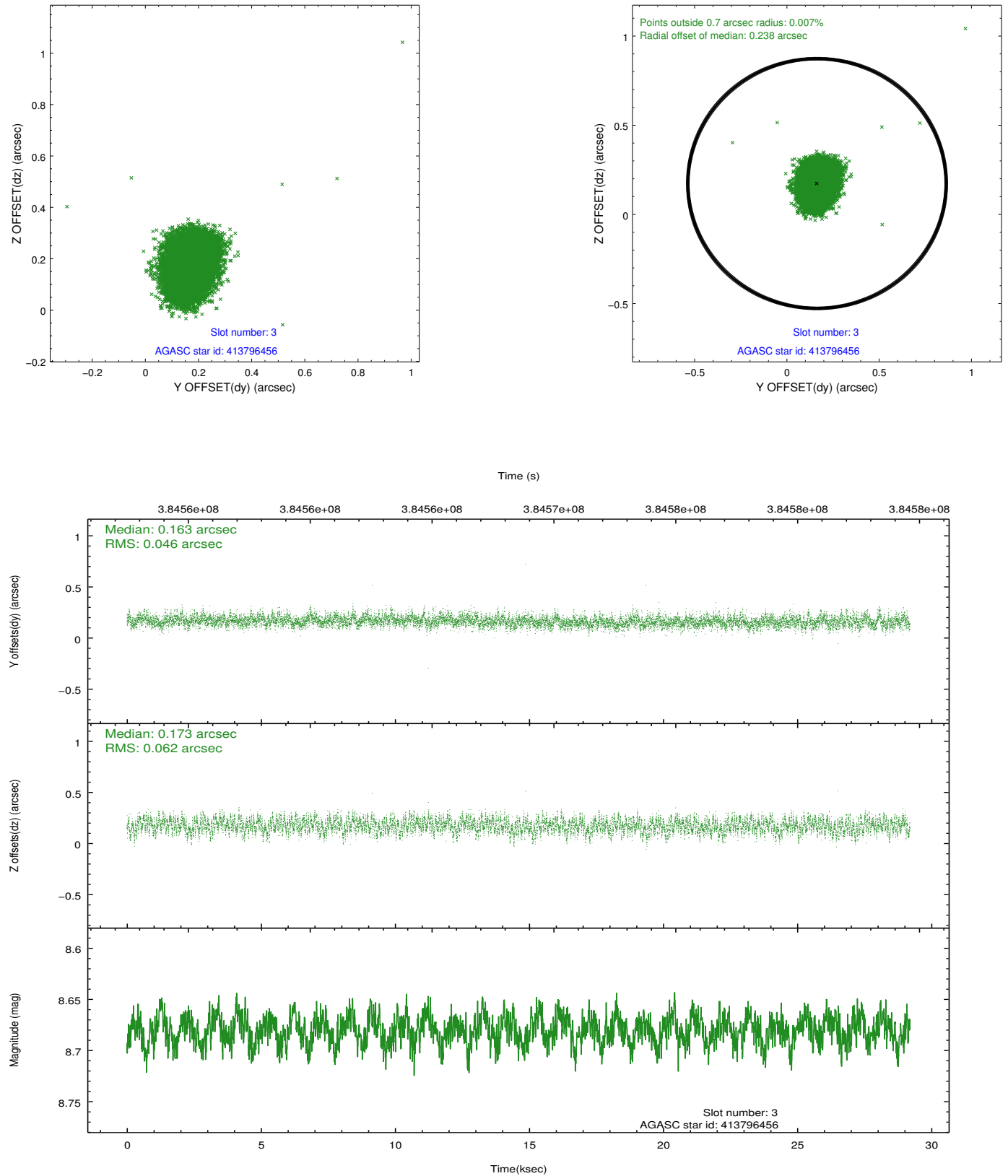


### Slot Statistics

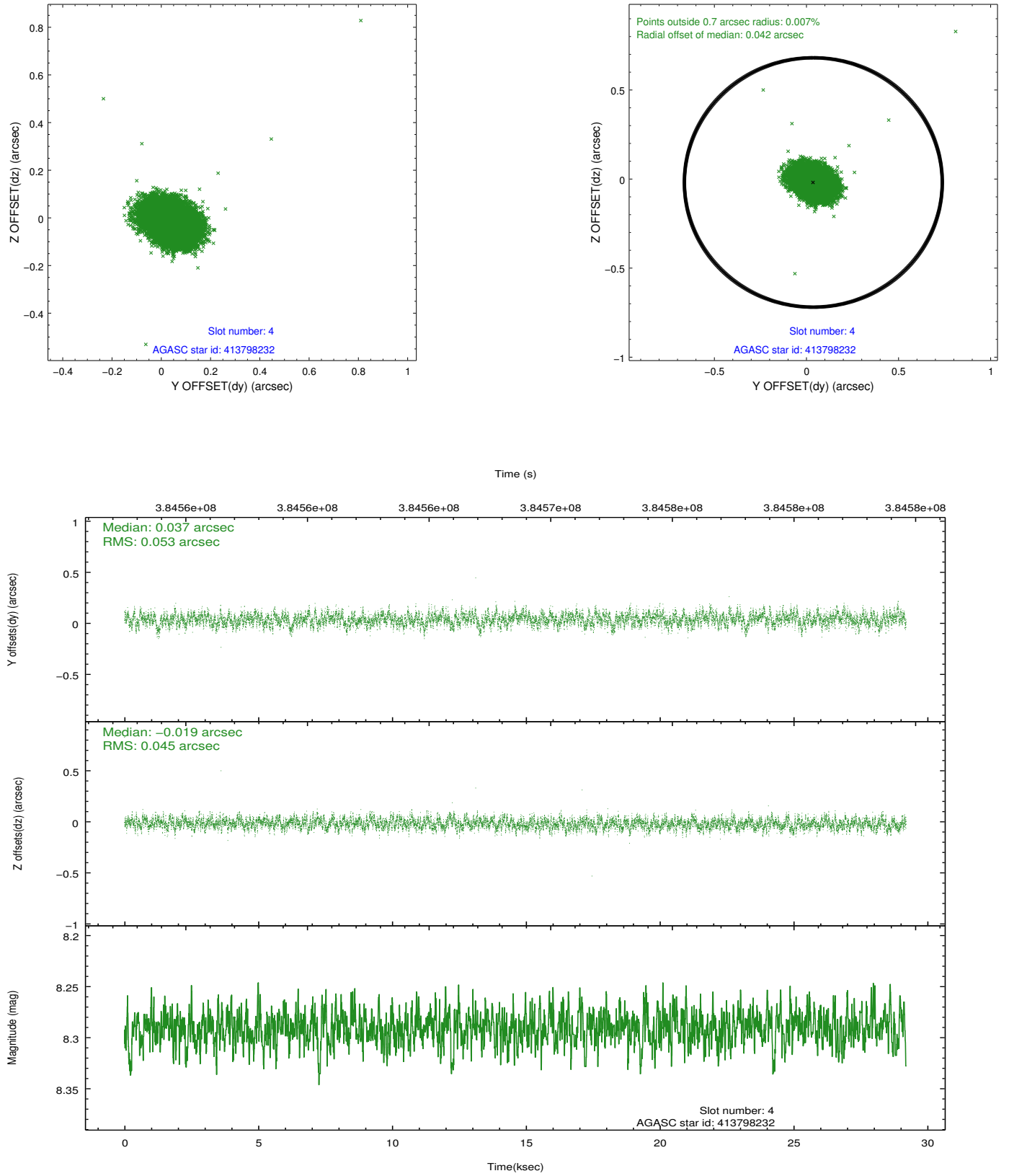
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-2	6.96	7121	-0.009	-0.060	0.017	0.025	0.000000	0.000000	-768.25	-846.19
1	FID	ACIS-I-5	7.03	7120	-0.172	0.054	0.014	0.026	0.000000	0.000000	-1822.50	1057.76
2	FID	ACIS-I-6	7.03	7123	0.088	0.079	0.018	0.027	0.000000	0.000000	391.54	1702.32
3	GUIDE	413796456	8.68	14236	0.163	0.173	0.082	0.133	308.312084	40.613132	-1582.20	-536.69
4	GUIDE	413798232	8.29	14234	0.037	-0.019	0.073	0.120	309.116117	41.044272	1060.23	-1007.09
5	GUIDE	413805792	7.32	14238	0.016	-0.011	0.066	0.109	307.778748	40.858024	-1962.82	1121.28
6	GUIDE	414326136	7.35	14244	-0.135	-0.173	0.066	0.103	308.256176	41.473642	528.46	1735.75
7	GUIDE	414327224	8.00	14225	-0.083	0.029	0.072	0.115	309.355439	41.393115	2407.59	-578.45

## 2.4 Star Slots

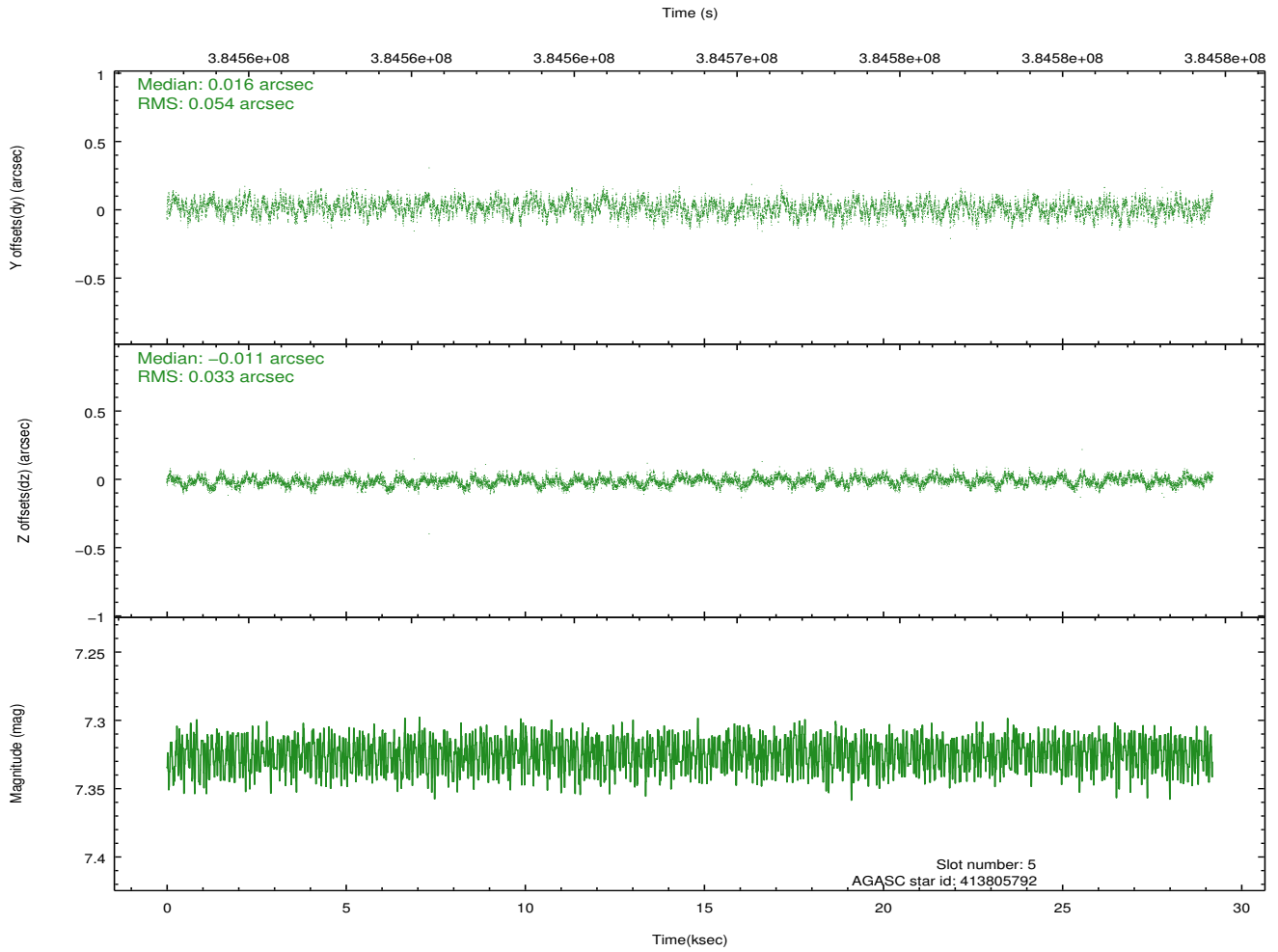
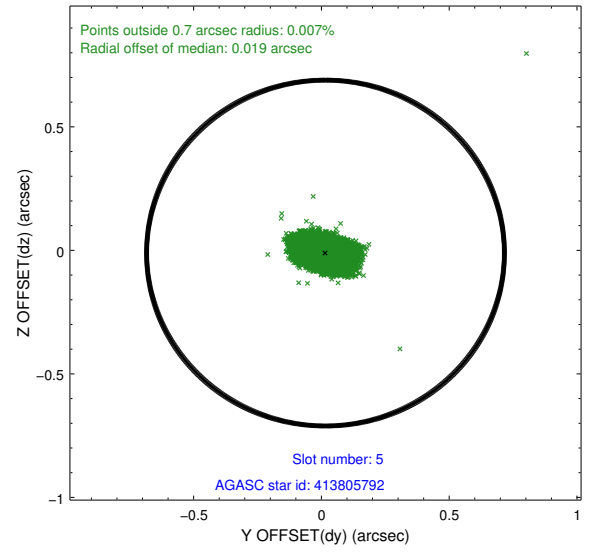
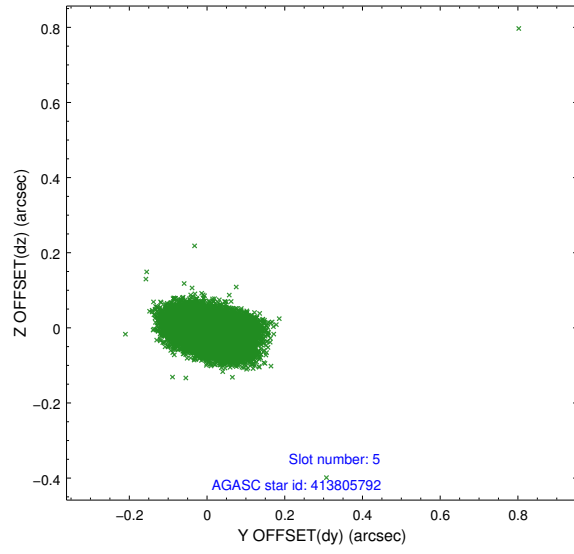
### 2.4.1 Slot 3



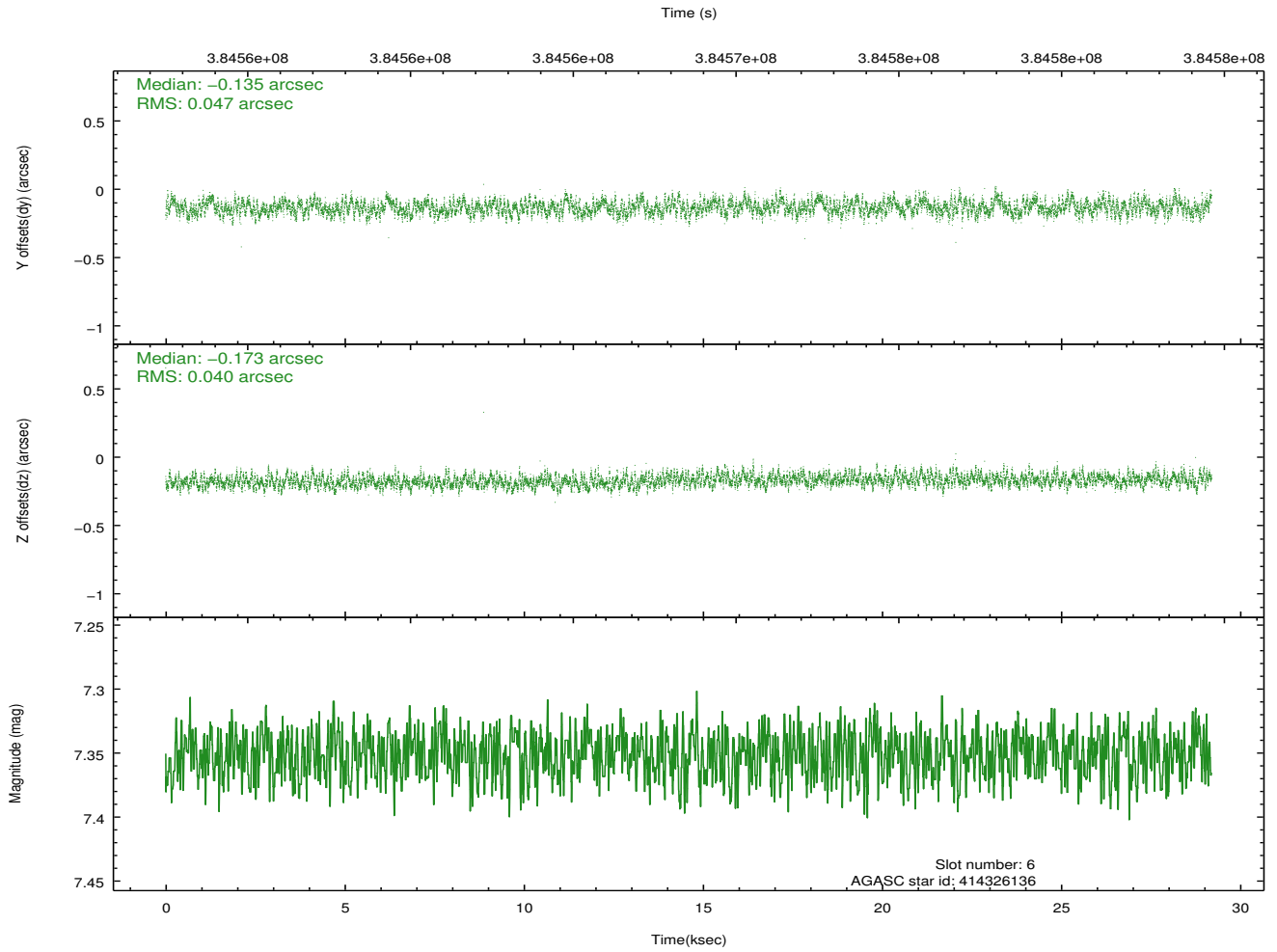
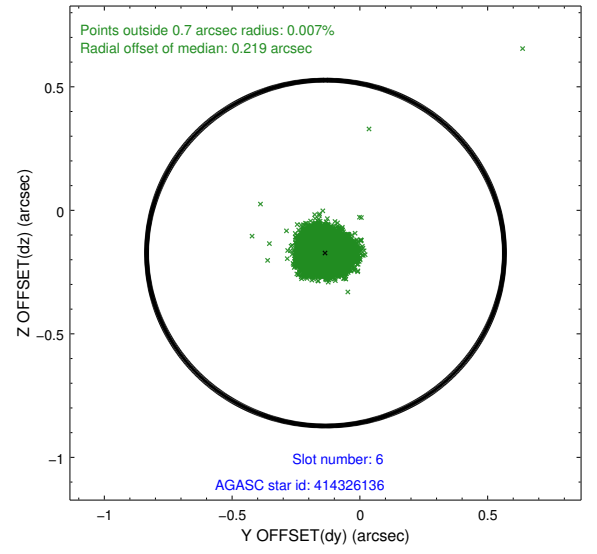
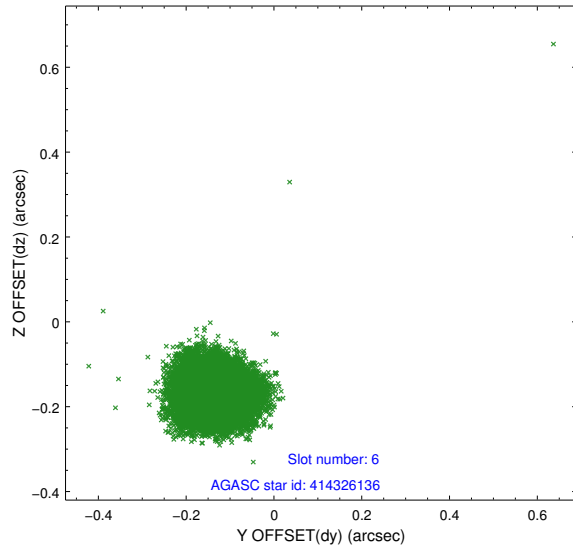
## 2.4.2 Slot 4



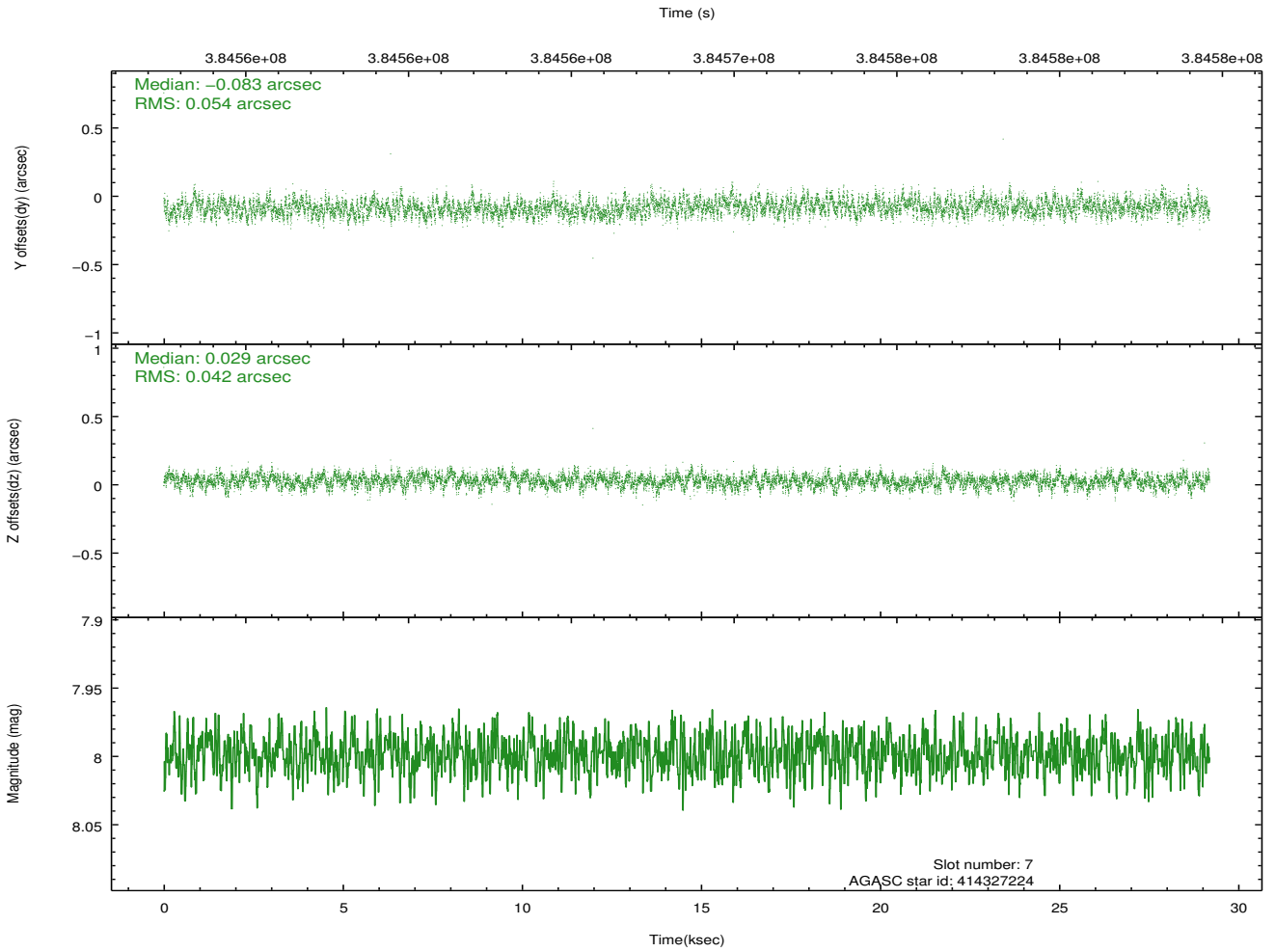
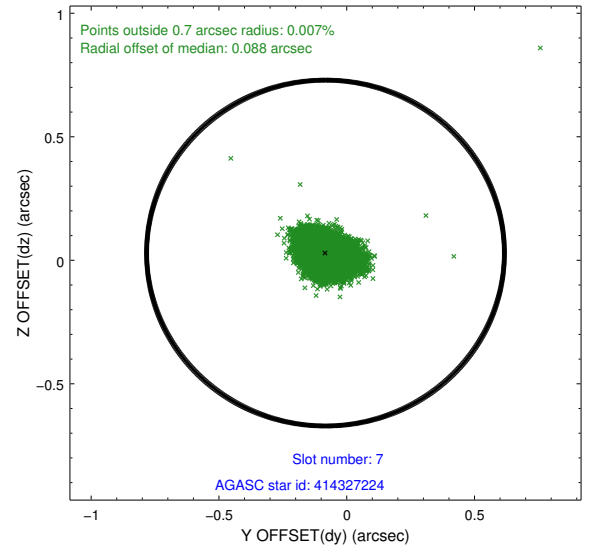
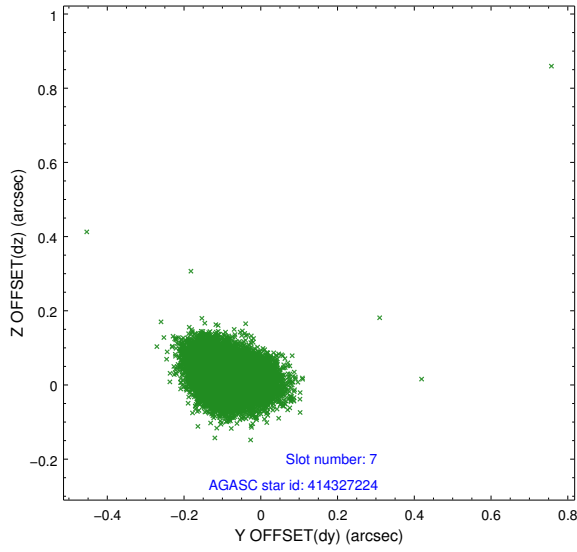
### 2.4.3 Slot 5



## 2.4.4 Slot 6

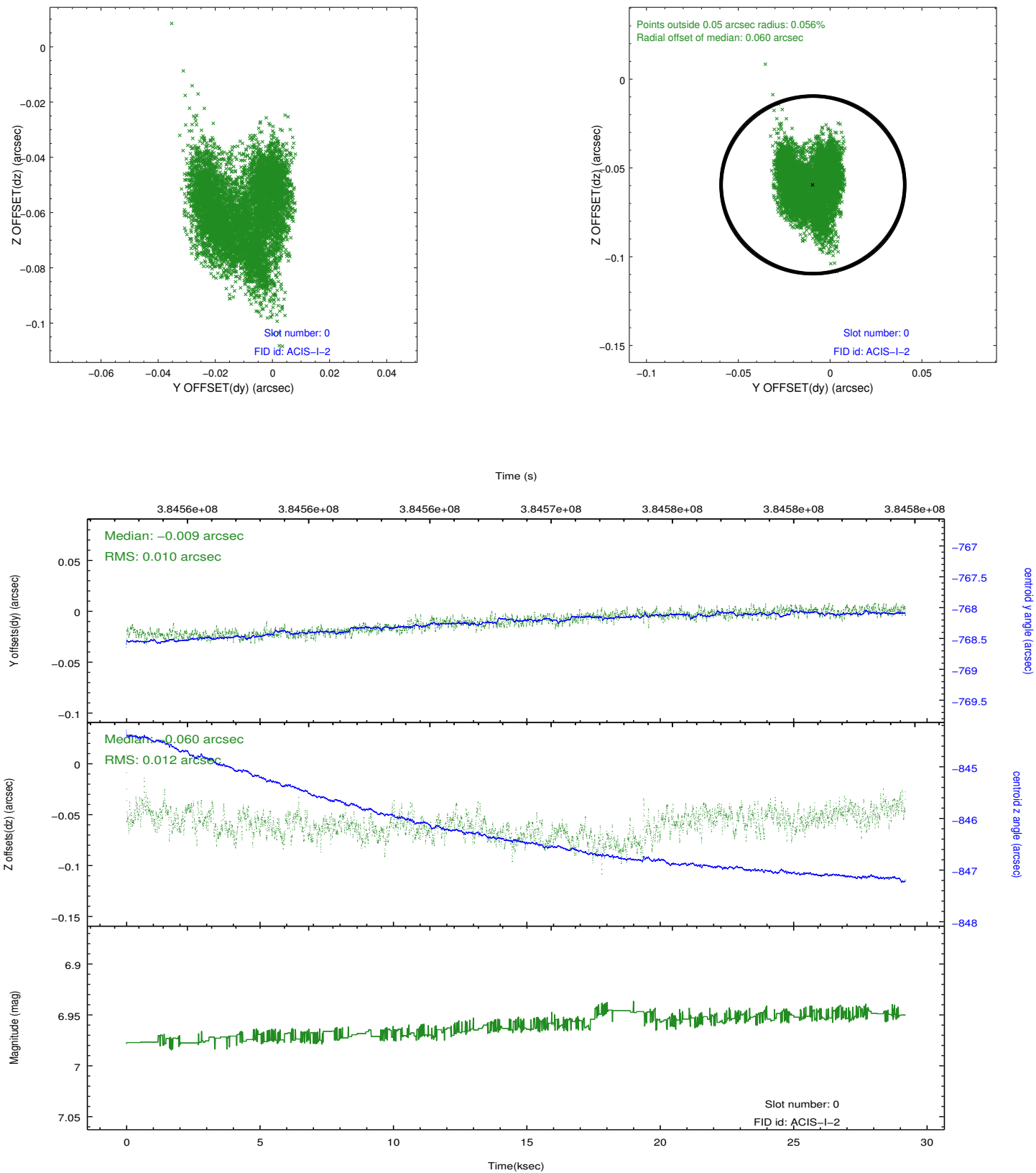


## 2.4.5 Slot 7

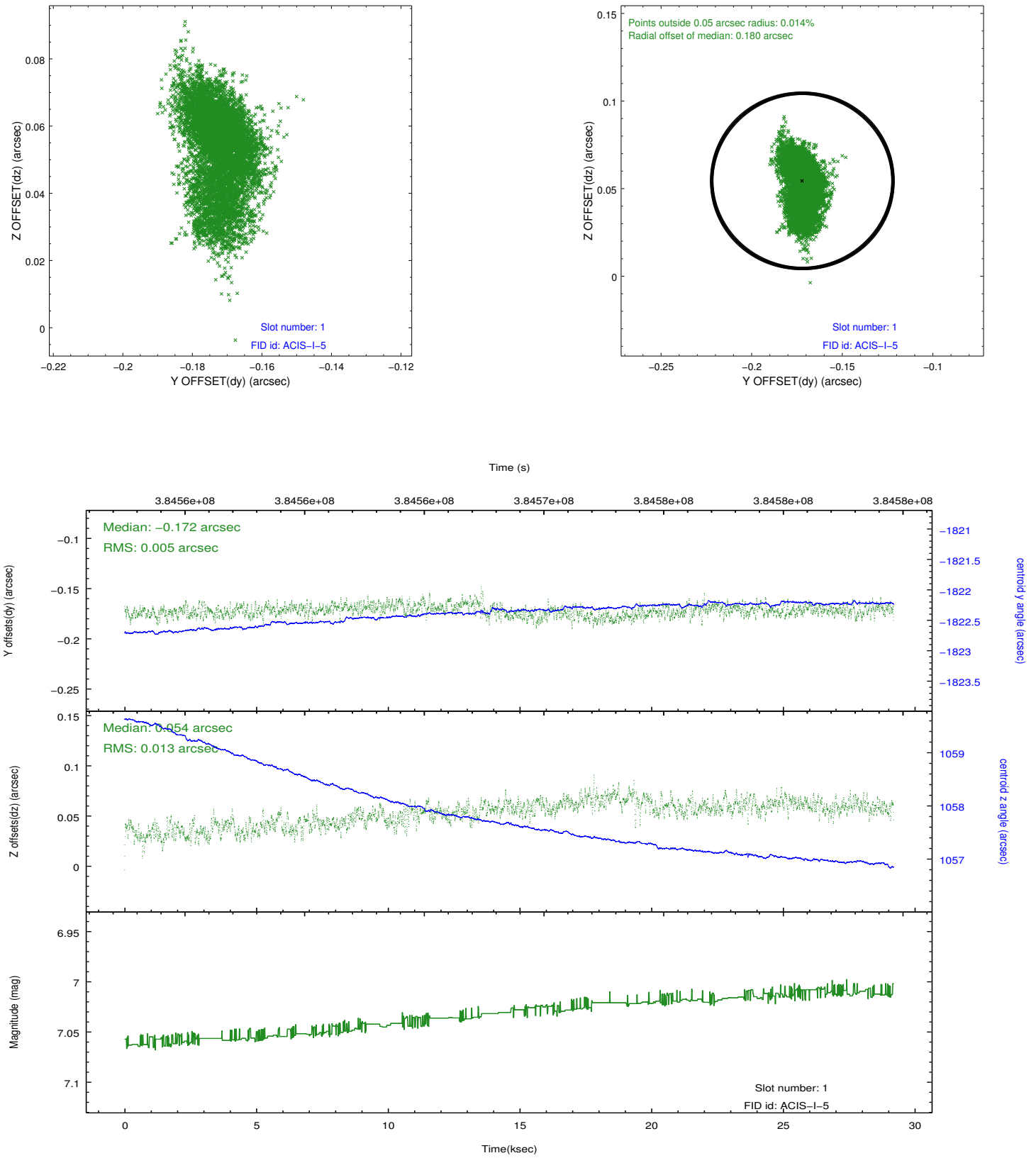


## 2.5 FID Slots

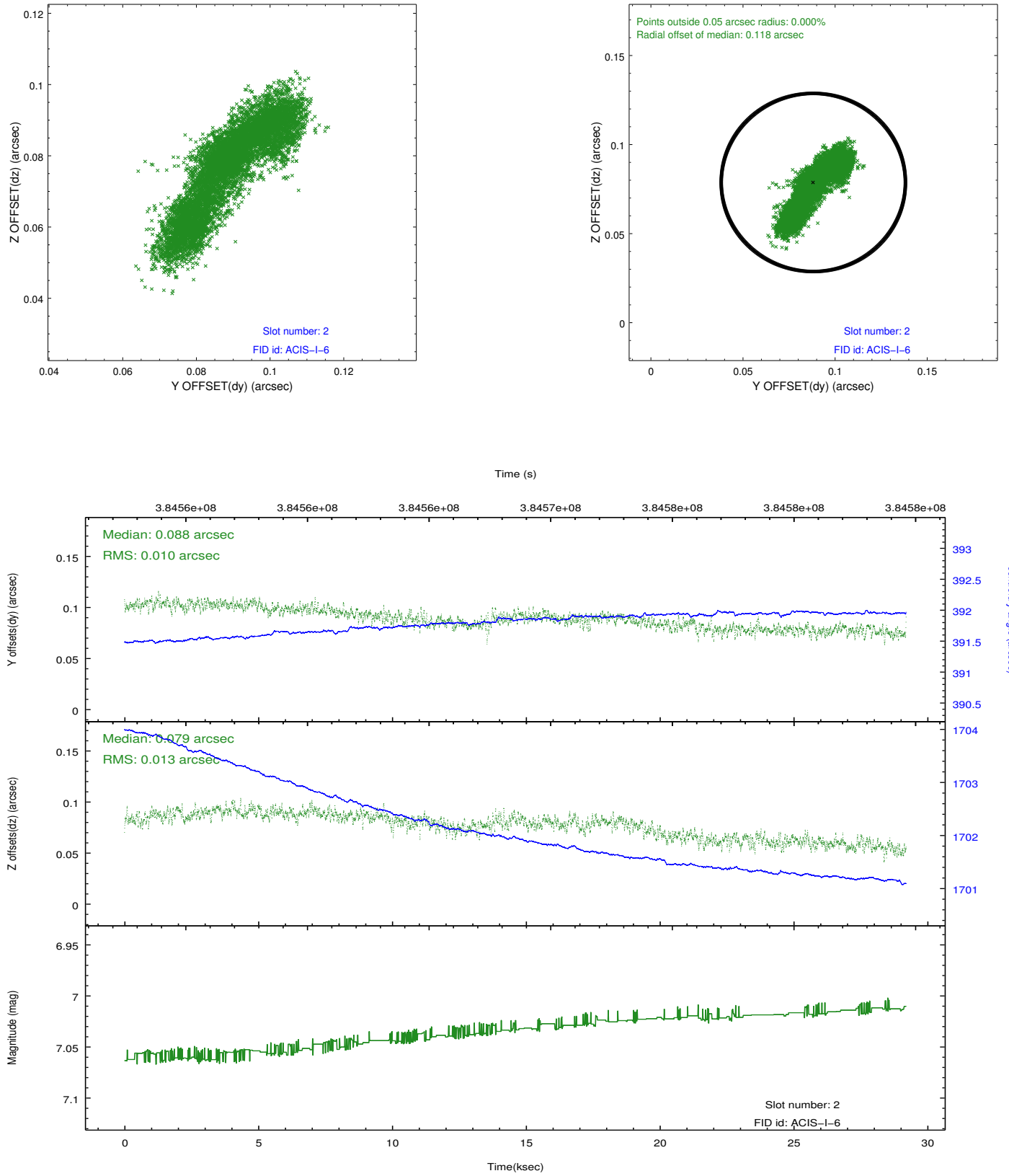
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



## A Summary

### A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2012.06.28
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	28.035076954663

### A.2 Comments

Roll preference met.